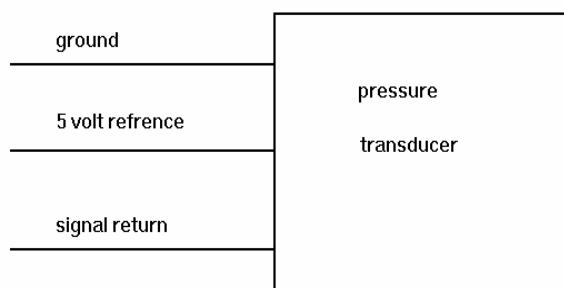


TECH TIP

Pressure Transducer Quick Test

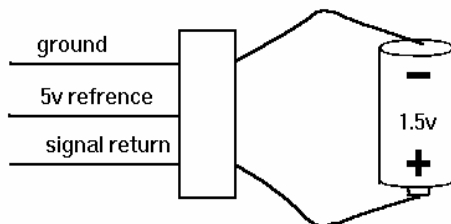
The pressure transducer is a computer sensor used, on some GM and Chrysler vehicles, to replace up to three separate high-side pressure switches: high-pressure cut-off, low-pressure cut-off and condenser fan.



The transducer varies the voltage on the signal return in relation to high-side pressure. As pressure increases the voltage increases: zero psi = .10v to 450 psi = 4.90v. Normal operating range is between 1.0v (76 psi) to 4.4v (400 psi).

With a customer complaint of no compressor operation, OEM test procedures include verifying the refrigerant pressure with gauges and the use of a 'scan' tool to compare the transducer signal to the computer. There are several steps to verify voltage, ground and resistance to determine if it's the transducer, wiring, connectors or the computer at fault. These steps will insure a proper diagnosis and repair without any guesswork.

However, if a 'scan' tool is not available there is a simple test that can help determine if the transducer is faulty. Unplug the harness connector from the transducer and jump a 1.5v flashlight battery between the signal return and ground as shown below.



This will supply the computer with an acceptable voltage that is within the normal operating range. If the computer engages the clutch at this point, then the wiring and computer should be ok, and the transducer is faulty.

Note: Do not allow the compressor to operate for more than 30 to 60 seconds. The 1.5v signal is not enough to engage the cooling fan or disengage the clutch when high-side pressure exceeds 400 psi.